

REMARKS

Claims 1, 6-13, 15, 16, and 20-48 are pending. Claims 1, 7, 12, 13, 20, 21, 23, 25, and 30 have been amended and are supported by Figures 7 and 9 and page 9, lines 19-23, of the specification as filed. Claims 41-48 have been added to enhance the scope of patent protection and are supported by Figures 7 and 9 and page 11, lines 2-8, of the specification. It is respectfully submitted that no new matter has been added.

The Patent Office rejected claim 12 under 35 U.S.C. 112, second paragraph, as being indefinite. Claim 12 has been amended as suggested by the Patent Office. It is respectfully requested that the Patent Office withdraw its rejection under 35 U.S.C. 112, second paragraph, of claim 12.

The Patent Office rejected claims 1, 6-12, 21, 22, 25, 26, 28, and 35 under 35 U.S.C. 103(a) as being unpatentable over Applicant's Background of the Invention (BOI) in view of Smith, U.S. Patent No. 6,389,059, and further in view of Sakoda, U.S. Published Patent Application No. 2001/0043583.

The Patent Office rejected claims 13, 15, 16, 27, 29-34, and 36 under 35 U.S.C. 103(a) as being unpatentable over Applicant's Background of the Invention in view of Smith, U.S. Patent No. 6,389,059, and further in view of Sakoda, U.S. Published Patent Application No. 2001/0043583.

The Patent Office rejected claim 20 under 35 U.S.C. 103(a) as being unpatentable over Applicant's Background of the Invention in view of Smith, U.S. Patent No. 6,389,059 (and apparently further in view of Sakoda, U.S. Published Patent Application No. 2001/0043583).

All claims recite simultaneously multiplying a received RF signal by a plurality of oscillator signals (as disclosed, for example, on page 9, lines 19-23, of the specification).

Applicant's Background of the Invention (BOI) does not disclose or suggest simultaneously multiplying a received RF signal by a plurality of oscillator signals. The BOI (page 3, line 30, through page 4, line 5) discloses that frequencies f_{c1} , f_{c2} , and f_{c3} are downconverted by the same frequency f_{LO} . The BOI does not disclose or suggest simultaneously multiplying a received RF signal by a plurality of oscillator signals.

Smith discloses a dual-mode transmitter that is used to select narrowband or spread-spectrum modulation (column 7, lines 28-31). A frequency converter converts, using the local

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oscillator frequency, the filtered narrowband modulated signal to an intermediate frequency signal (column 7, lines 48-50). Smith discloses that the input signal is converted to an intermediate frequency (IF) which may be the same for either conventional narrowband or for spread spectrum signals (column 8, lines 42-44). Smith discloses more than two modes can be supported by the same general receiver configuration of Figure 3, such as operation at multiple frequencies, use of multiple codes, multiple modulation formats, or time-sequential selection of operating mode (column 9, lines 24-28). Smith discloses "monitoring a frequency in each band (or transmitting to a frequency in each band) at once, because both (f_1+f_2) and (f_1-f_2) can be stepped down to the same intermediate frequency with a single local oscillator" (column 15, lines 45-49). Smith does not disclose simultaneously multiplying a received RF signal by a plurality of oscillator signals.

Sakoda discloses a frequency synthesizer 31 to convert a reception signal into an intermediate frequency of a 100 MHz band (paragraph 0039) in which the synthesizer generates signals at an interval of 150 kHz. However, like the Background of the Invention and Smith, Sakoda does not disclose or suggest simultaneously multiplying a received RF signal by a plurality of oscillator signals.

Thus, claims 1, 6-13, 15, 16, and 20-40 are allowable over the Background of the Invention, Smith, and Sakoda.

Furthermore, claims 42-47 recite decoding or a decoder comprising a first set of RAKE fingers for decoding in the first mode and a second set of RAKE fingers for decoding in the second mode, subject matter not disclosed or suggested by the Background of the Invention, Smith, or Sakoda. Thus, claims 42-47 are allowable over the Background of the Invention, Smith, and Sakoda for this additional reason.

The Patent Office rejected claims 23, 24, and 37-40 under 35 U.S.C. 103(a) as being unpatentable over Applicant's Background of the Invention in view of Smith, U.S. Patent No. 6,389,059, and Sakoda, U.S. Published Patent Application No. 2001/0043583, and further in view of Igarashi, U.S. Patent No. 6,236,848.

The Patent Office asserted that Igarashi discloses a receiver integrated circuit for a mobile telephone operating in dual modes (abstract, column 1, lines 5-10) (page 14 of the Office Action dated May 17, 2007).

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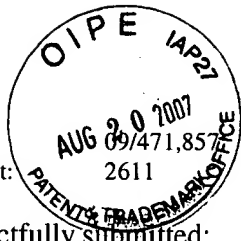
Igarashi does not remedy the deficiency of the Background of the Invention, Smith, or Sakoda as Igarashi does not disclose or suggest simultaneously multiplying a received RF signal by a plurality of oscillator signals.

Thus, claims 23, 24, and 37-40 are allowable.

The Patent Office is respectfully requested to reconsider and remove the rejections of the claims 1, 6-13, 15, 16, and 20-40 under 35 U.S.C. 103(a) based on Applicant's Background of the Invention, Smith, and Sakoda, whether or not in combination with Igarashi, and to allow all of the pending claims 1, 6-13, 15, 16, and 20-48 as now presented for examination. An early notification of the allowability of claims 1, 6-13, 15, 16, and 20-48 is earnestly solicited.

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Respectfully submitted:

Walter J. Malinowski August 16, 2007

Walter J. Malinowski

Date

Reg. No.: 43,423

Customer No.: 29683

HARRINGTON & SMITH, PC

4 Research Drive

Shelton, CT 06484-6212

Telephone: (203) 925-9400, extension 19

Facsimile: (203) 944-0245

email: wmalinowski@hspatent.com

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8/16/2007 Elaine F. Brian

Date

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